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THE PLOTTER

CLACKAMAS COUNTY AREA T/S
USERS GROUP
NEWSLETTER

VOLUME 3 *** NUMBER 6 & 7
JUNE-JULY 1985

EDITED BY: ROD GOVEN
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TREASURER: ROD GOVEN
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* * * * *

MEETING

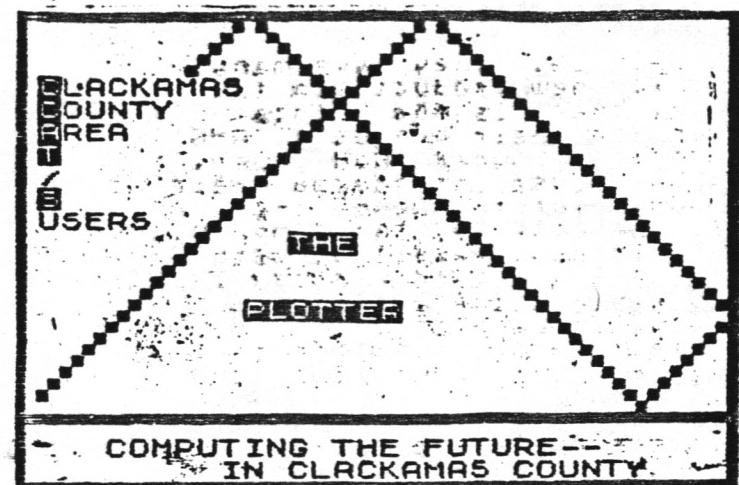
Our June meeting will be held:

on: THURSDAY, JUNE 6, 1985
at: 7:30 P. M.
in: COMMUNITY ROOM
FAR WEST FED S & L
OREGON CITY SHOPPING CTR

We hope to see all of you there.
We hope to have much to see and
hear about.

BE SURE TO COME!
BRING A FRIEND!
YOU WILL ALWAYS
PICK UP USEFUL
INFORMATION!!

BE THERE >>>



COMING UP NEXT MEETING

At our June meeting there will be quite a bit going on. We will have a continuation of the MACHINE CODE CLASS. We hope to have DICK WAGNER giving a demo of our new EPROM PROGRAMMER. We will have a new magazine to see, DENNIS JURRIES will have a FREE GIFT for everyone who attends. As always there is sure to be a lot of hardware and software to see and learn about. As usual, anyone is welcome to come out and see what we are all about. ANY QUESTIONS? BRING THEM TO THE MEETING. SOMEONE IS SURE TO HAVE AN ANSWER. WE'LL GIVE IT OUR BEST SHOT!

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FROM THE CHAIRMAN'S COMPUTER--

DICK WAGNER

THIS ARTICLE WAS WRITTEN ON MY T/S 1000 WITH AN ELEMENTARY WORD PROCESSOR SO I COULD SHOW THAT IT CAN BE DONE.

THIS W.P. HAS MANY OF THE FEATURES OF ELABORATE PROGRAMS, SUCH AUTO-REPEAT, FLASHING CURSOR, CLEAR LINES, PRINTER, AND MANY MORE. THIS PROGRAM WILL BE IN OUR TAPE LIBRARY, ALONG WITH ROUTINES THAT EXPLAIN SOME OF THOSE USED IN W.P.

OUR RECENT QUESTIONNAIRE INDICATED THERE WAS SOME INTEREST FOR HELP IN LEARNING MORE ABOUT THE 1000. I HOPE WE CAN PROVIDE THIS HELP BY USE OF THE PLOTTER.

WE ARE LIMITED IN SPACE AND TIME TO USE THE PLOTTER FOR TUTORING. I AM SURE WE CAN GIVE REFERENCES SO MEMBERS WILL BETTER KNOW WHAT OUR LIBRARY CONTAINS IN MATERIAL SUITABLE FOR THIS PURPOSE.

I PERSONALLY HAVE A FAIR AMOUNT OF MATERIAL I PLAN TO USE AT TIMES FOR PLOTTER SHORT PROGRAMS AIMED AT HELPING THOSE IN NEED.

SECRETARY'S SECRETS?

Our May Meeting was called to order at 7:30 P.M. on May 2nd. There were 18 at the meeting. After the announcements and the Treasurer's report, our Chairman, Dick Wagner, asked for Old Business.

There was one guest and we had our first visit from James Becroft, a paid member from The Dalles. WELCOME JAMES, WE HOPE THAT YOU CAN MAKE IT AGAIN!

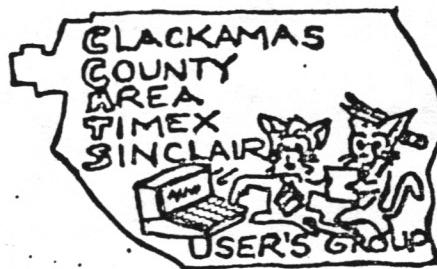
The Eprom Programmer was shown and discussed. The GESSO EPROM PROGRAMMER will make it possible for us to put a lot of our most used programs onto EPROMS to facilitate faster and easier

program usage. The unit plugs into the cartridge Port and uses the power supply for the 2040 printer. There are very few things to change in the computer itself. There will be a review on this unit at a later date. The members present voted a tentative approval of the payment of \$100 for the unit and associated hardware and documentation.

We discussed the new subscriptions coming up. We voted to subscribe for two years to the COMPUTER SHOPPER. We also renewed our sub to ZX COMPUTING for 1 more year. We also decided to renew T-S HORIZONS for 1 more year and receive a \$5 discount on a sub to COMPUTER TRADER at the same time.

We adjourned at 8:30 P.M. and DENNIS JURRIES started his class on basic MACHINE CODE PROGRAMMING.

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MACHINE CODE CLASS

There will be a short machine code class at the end of the regular meeting. All of those involved in this class should have a hard copy of their program to turn in at that time.

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FROM THE EDITOR'S DESK -

As Editor of THE PLOTTER, I have tried, for the most part, to put together a newsletter that all of the members of CCAT/S could enjoy and be proud of. When I see articles and reviews from THE PLOTTER reprinted in other publications, I feel that I am succeeding in a small way.

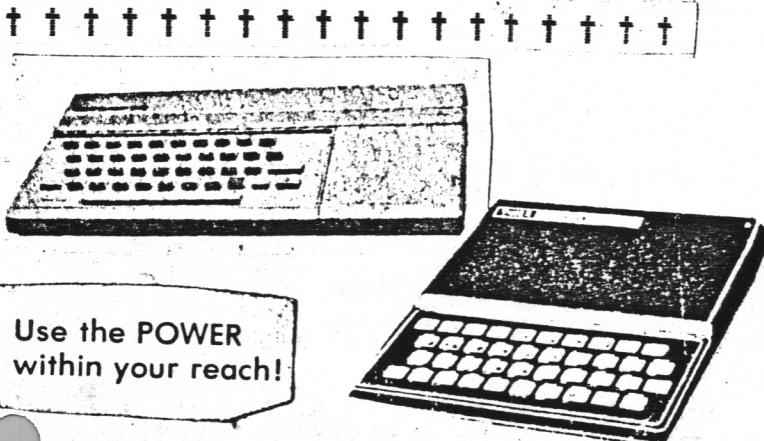
I hope that, for the past 22 months, I have helped our members and subscribers to keep abreast of at least some of the more important news from TS LAND both here and around the world.

As mentioned in the last issue, this issue will be the last full issue of THE PLOTTER until SEPTEMBER. I will be sending out a 1 page meeting notice for the AUGUST meeting. This hiatus will give me a break and will allow us to accumulate a small backlog of material for the newsletter.

If I have seemed to dwell on the fact that we need more people to contribute material and time to the newsletter and to the group, it is only because I have a deep concern for both and from my position I can see what apathy and general lack of interest can do to a group such as ours. I cannot and will not apologize for my concern. If more members had the same concern, we would have, by far, the best newsletter in all of TS LAND! I feel that anyone who does not contribute either time or material has absolutely NO right to criticize.

To all of you who do help in any way whatsoever, I extend my deepest thanks and appreciation. Keep up the good work.

Title next time.....



**Use the POWER
within your reach!**

BITS and BYTES

Lots of news this month. I hope that I can give you some that you can make good use of.

If any of you are wondering what to do for repair or parts for your TS machine, I am here to tell you that if it is still under warranty, the LITTLE ROCK REPAIR CENTER WILL BE OPEN AT LEAST UNTIL OCTOBER OF THIS YEAR. If your unit is out of warranty, then you can get service and parts from:

T-5 CONNECTION
3832 WATTERSON
CINCINNATI, OH 45227
(513) 271-5575 8AM / 10PM EDT

Repair charges are \$15 to \$20
for 1000 and 1500's, \$40 for the
2068.

We are hearing more about the Timex products from Portugal. They are producing and selling a modified version of the 2068 called the TC 2068 or The Silver Avenger. They have sold several thousand of them so far in Europe and are now going to license them in the USA. They are also selling the Timex Disk Drive System. We hope that they can market them successfully here, as that will give all of us TS users a boost, both in morale and in new products. We will have more news on this later.

No news yet from RAMEX on the Disk Drive I/F that Dennis Jurries has on order. They have said that they were to ship over and over and yet they do not. He is, as you or I might be, very unhappy with the service. I'm sure that we will hear more from him on this.

Aerco is said to be working on their I/F. They are trying to get it set up to run CP/M. It is said that the I/F is functioning perfectly in all other respects. Too bad they can't ship what they have and make refinements later.

For all of the 1000 owners out there who wish to have a full sized keyboard, we have, in our local area, the CRICKET HOUSE KEYBOARD now available through RMG Enterprises. See ad in this issue.

(Cont. next page)

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We have heard that TIMEX is under contract to one of the large correspondence schools to supply TS 1500's for at least one more year. We have also heard that if workers of the telephone company take the computer course they will receive a partial rebate, thus paying for the 1500 and then some. We may get some new members and new interest in our user groups.

I know that there is much more news out there in TS LAND, but due to time limit I am going to stop for this time. See you next time for more BITS & BYTES!

===== WAFER TIPS =====

by: ROD GOWEN

This month I will attempt to explain in the simplest way I can, to show all you new micro-drive owners how to convert your VU-FILE program to the wafer.

FIRST, AND MOST IMPORTANT, I ADVISE ALL OF YOU TO GET A COPY OF THE HEADER READER PROGRAM FOR THE 2068!! This will soon be available to all in the library for you to copy. Our thanks to DENNIS JURRIES for putting together this utility tape for us.

With the HEADER READER® loaded into the 2068, you are ready to convert almost any program to the wafer. The reason that you cannot convert VU-FILE without the READER is that it was SAVED with a direct command and without a loader program separate from the main program. We need to know the number of bytes of MC that we have to SAVE. In this case we will get readings on the SCREEN and the MC as well as the basic portion of the program.

50 BORDER 1: PAPER 1: INK 1:
CLEAR 28287: LOAD ""SCREEN\$: LOA
""CODE

The above listing is what you will see when you start LOADING VU-FILE and hit the BREAK key after the first section after the title appears has LOADED. Now we must change LINE 50 to look like the listing below.

50 BORDER 1: PAPER 1: INK 1
CLEAR 28287: LOAD "@VF"CODE

If you do not care to have the SCREEN\$, then you can DELETE that part of the LOAD line. I have found that, with the MICRO DRIVE, the SCREEN\$ come and go so fast that I don't need them.

#####

They do use memory. For the rest of this article I will disregard the SCREEN\$. If you want to leave it in, let me know and I will tell you how.

Once you have made the changes, SAVE the LOADER by using the direct command: (make sure you have a formatted new wafer in the drive.)

SAVE "@1,vf"LINE 50

At this point you must CLEAR the computer by turning it off and on again. Then LOAD the HEADER READER program. With the program running, start LOADING the VU-FILE tape and watch as it reads the headers. When it gets to the main program code, you will see the following information:

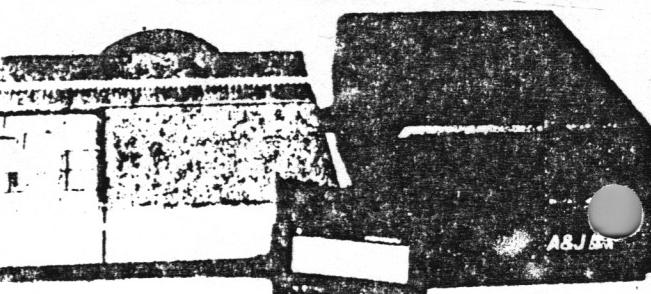
BYTES: 7216
DATA LENGTH: 7216
START ADDRESS: 28288

This listing gives you all of the information that you need to SAVE the CODE on the Wafer. The first line tells you the name of the program, in this case, "c". As this is the machine code portion of the program, it is listed as "bytes". The second line tells you the number of bytes in the program. This one has 7216 bytes. The third line has the starting address of the program. To SAVE this section of the program, you must use the direct command as follows:

SAVE "@2,c"CODE 28288,7216

Once this is done, you should have a wafer version of VU-FILE. You could try to VERIFY the parts of the program, but I have found that, with the speed of the MICRODRIVE, it is easier to turn off the computer, turn it back on, and LOAD the program. If all was done properly, the finished product should work fine. If you find that I need to be corrected, please do not hesitate to let me know.

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A&J MODEL 2000

HARDWARE

EPROM PROGRAMMER
TS 2068 COMPUTER

Dick Wagner

Bob Orrfelt, Gesso Software, has developed an EPROM programmer different from others. You use the computer to do the work. The hardware fits into the computer cartridge slot. Programs within the computer memory are loaded into the EPROM which is installed on the special board. A ZIF (zero insertion force) socket is provided.

Two small switches at the end of the board provide full control. One switch (S1) applies +5 volts to part of the circuit thus activating the EPROM. Switch S2 activates a 74LS221 One Shot timer used to time the program pulses into the EPROM. A red LED indicates when S1 is on. A green LED indicates when the EPROM is being programmed. A novel power supply is on the board to provide 21 volts. You need 24 volts AC for this so you use your 2040 printer transformer!

The circuit board is Orrfelt's standard 2001 board (Used with programmed EPROMs) with major changes by adding considerable additional wiring and trace cutting. While the component side is well populated, the trace side is very complex with lots of jumpers.

Documentation is good for a proto type device but is short on clear explanation of mechanical steps. Two printed photos show where to add a supplied wire to the 2068 circuit board as well as a trace to cut. The solder work require care due to crowded conditions. It is necessary to remove the circuit board. Replacing the keyboard cable is not easy because of its short length.

The board accommodates 2764 and 27128 EPROMs. While an EPROM program can be used with this board by using S1, a 2001 board is provided for normal use. These two EPROMs are provided to get you started.

Software includes the programs required to operate the programmer, on tape and in the manual. However, a program called "rom calc" is only on tape. Part of the programs are for 8k only and part for 16k programs. Rom calc is a novel calculator program that displays a hand calculator. No documentation is provided except what is in the program.

Test programs are used first to make certain you have a clear EPROM. If not clear addresses and data are displayed. About 2 minutes to check a 2764. A program, "zap header", is next loaded into memory and then into EPROM. Then "zap basic" is loaded into the computer followed by your main program. The last step is to turn on switch S2 and enter RANDOMIZER USR 23755. The green LED flickers as the EPROM loads. With S2 off, 24 volt supply pulled, and NEU keyed in (S1 on), your basic program will auto run. It takes about 7 minutes to put 8k into the EPROM.

Some theory and explanation is provided in the manual, including DOCK BASIC (to explain the Sinclair Dock or cartridge port as used for this purpose). Bob also covers limitations on the use of his design, such as no 64 column video display, (excludes using for Tasword II?), can't use DEF FN & FN functions, can't lower RAMTOP into Dock EPROM addresses, can't use calculated GOTO & GO SUB numbers, for example.

I tried using sun light to erase the program on an EPROM but maybe our Oregon sun light lacks enough UV rays. Next I used an old UV sunlamp and did clean up in about 30 minutes. The EPROM had to be very close to the lamp tube.

A populated 2001 board, the programmer board, one each 2764 and 27128 EPROM, manual, program tape, and jumper wire are supplied. Price about \$100. This is not intended to be a mass produced package and a great deal of time was spent in development. Write to Robert Orrfelt, 3436 Bay Rd, Redwood City CA 94063 for answers about special program problems and further details.

FOR A FREE GIFT
COME TO THE NEXT
CCAT/S MEETING

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BROOKE'S LAW

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ADDING MANPOWER TO A LATE SOFTWARE PROJECT MAKES IT LATER.

AS THIS IS OUR LAST ISSUE OF THE PLOTTER UNTIL THE END OF AUGUST, WE WOULD LIKE TO USE THIS SPACE TO THANK ANY OF YOU WHO HAVE HELPED TO GET THIS NEWSLETTER TOGETHER AND OUT EACH MONTH AND TO WISH ALL OF OUR READERS THE SAFE AND SANE SUMMER WE ALL WANT TO HAVE.

WE WISH TO SAY THAT WE HAVE NO P & R AGAIN THIS MONTH FOR THE SAME REASON, NO ONE HAS FOUND THE TIME TO SUBMIT A PROGRAM OR A ROUTINE THAT WE COULD USE.

THIS IS THE SPACE THAT WOULD NORMALLY BE USED FOR THAT COLUMN. WE ARE, FOR THIS ISSUE, GOING TO LEAVE YOU WITH THESE WORDS AND A FEW LAWS OF COMPUTING. ENJOY!

GOLUB'S FIRST LAW OF COMPUTERDOM

=====

A CARELESSLY PLANNED PROJECT TAKES THREE TIMES LONGER TO COMPLETE THAN EXPECTED, A CAREFULLY PLANNED PROJECT TAKES ONLY TWICE AS LONG.

THE PRINCIPLE OF MULTIFUNCTIONAL DEVICES

=====

THE FEWER FUNCTIONS ANY DEVICE IS REQUIRED TO PERFORM, THE MORE PERFECTLY IT CAN PERFORM THOSE FUNCTIONS.

IBM POLLYANNA PRINCIPLE

=====

MACHINES SHOULD WORK, PEOPLE SHOULD THINK.

GILB'S FIRST LAW OF UNRELIABILITY

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COMPUTERS ARE UNRELIABLE, BUT HUMANS ARE MORE UNRELIABLE.

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LIBRARY NOTES

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COMPUTER SHYTH, A NEW MAGAZINE Dick Wagner

The first issue (quarterly) is probably a fair indication of the direction this magazine is going. A good start with 46 pages. Top quality printing and art work (no typos noted), and quality paper (not slick) makes it nice to read.

Articles are to be mainly construction subjects. These will be computers, handy tools to make, peripherals, test equipment, to name the general trend. Definitely no software except that required to make a project work.

The first issue includes a Z80 based computer from England (Part 1), a plotter/charter that will plot voltage against time, a motorized wire-wrap tool, and a RGB converter (to B&W).

Can you imagine a new computer magazine coming out on time as promised? This one did. Price is \$15 for four issues and you subscribe to those remaining in the year. See my copy at the June 8 meeting.

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SURVEY RESULTS

Of the 86 paid up members in our user group we have received 18 surveys. The following are the results of the survey.

TS 1000/ZX 81	19	TS 2020	7
TS 2068	14	TS 2040	14
Westridge 2050	2	TS 1500	2
Byte Back Modem	3	A&J Mic.	2
Spectrum ROM	3	Herco IO	2
Mindware Printer	1	Tasman IO1	
Gorilla Banana	2		
Epson RX 80 FT	2		

Three responders had only the TS 1000 computer. Of the many comments received the following were the most repeated. Several said that they would like to see a basic class that would teach tricks and tips. Many would like to see more contributions from members to the newsletter. A few would like to see a different improved print quality in the newsletter.

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CLASSIFIED ADS

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